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HOLMES & NARVER, Inc.
ENGINEERS-CONSTRUCTORS

TO: J. P. Ryan, General Superintendent JOB: 942

FROM: M. L. Prouty, Supt., Elect. Dept. RE: WEATHER STATION GENERATORS

DATE: 20 June 1957

On the basis of information received by this department, it is presently planned to use the 15KW generators, purchased for Operation REDWING, at certain of the weather station sites proposed for the forthcoming operation.

These generators are all single phase and were used with separate feeders, no provision being made for interchange of feeder circuits in event of any individual generator failure. This resulted in many emergency runs to the locations in an attempt to keep the unit running.

In addition to the proposed usage of five (5) each of the single phase units (4 each to be used for furnishing camp power and lights with the fifth unit as spare for the other four) it is tentatively proposed to use two (2) each 208-Volt, 3 phase, 4 wire generators. One of these three phase generators to furnish power for mess hall range operation only and the other three phase generator to act as standby for the range operation only.

Due to voltage generation difference between the single phase and the three phase machines, as well as the extremely excessive amount of switchgear that would be necessary, it would be completely impractical to attempt standby interchange between the three phase and one phase systems.

This will make it necessary to run a minimum of four single phase units plus one three phase unit in order to provide all camp lights and power and mess hall operation.

In addition to the undesirable situation outlined in the preceeding paragraph, the following conditions also exist: (Ref: Print #53003-3X3, dtd. 8-4-55)

1. Individual feeder runs must be made from generation point to each location as outlined, as well as an additional run to the mess hall for range power supply.

2. It will be necessary to maintain two separate lists of supply parts both for the 15KW and the 60KW generators and prime movers. Unless a complete list of parts is maintained at each site in question wrong or misleading information received from said site can easily result in a service man arriving at the site with the wrong repair parts.

By the simple process of procuring one (1) each additional generator (60KW) identical to the two already proposed for these sites, the five (5) single phase generators can be completely eliminated from the picture.

(See page 2)

Encl. By M. Prouty 22 June 57

TO: J. P. Ryan, General Supt. DATE: 20 June 1957
FROM: M. L. Prouty, Supt., Elect. Dept. SUBJ: WEATHER STATION GENERATORS (Cont'd)

The three (3) 60KW Generators can be installed to operate in parallel, with any two carrying the load (many times only one will be necessary) and any one of the generators can be repaired on a 'convenience' rather than an 'emergency' basis.

Additionally, only one set of main feeders would be required from point of generation to a centrally located camp distribution point and spare parts requirements reduced to a minimum.

The writer is convinced that these sites are of sufficient importance as to warrant a complete and thorough review of this situation by everyone concerned.

M. L. PROUTY
Supt., Elect. Dept.

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cc: C-M (3)
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